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**14. ABSTRACT**

This project was designed to implement and assess the feasibility of a unique and newly-developed intervention (TEAM: Troop Education for Army Morale: Units and Individuals Working Together). TEAM is designed to meet the specific post deployment needs of Mortuary Affairs (MA) Soldiers through individual training, active engagement in problem solving and accessing care, enhanced buddy care and spouse support. Short and longer-term outcome in MA Soldiers are assessed. Specific aims include: 1) demonstrating the feasibility of TEAM intervention for care, support and lessening barriers to care for MA Soldiers and 2) assessing the effectiveness of TEAM on disorder (e.g., PTSD, depression), distress, health risk behaviors (e.g., alcohol or tobacco use), work function, marital conflict, and barriers to health care utilization. Seven cohorts (total of 105 Soldiers) have been recruited from the 54th and 111th MA companies at Ft Lee, VA. Subject recruitment continues. Collected data has been entered into the database. Data cleaning and preparations for data analysis are ongoing.

**15. SUBJECT TERMS**
Mortuary Affairs Soldiers, service members, post deployment, distress, PTSD, assessment, education, training, intervention, social context, buddies, spouse

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## INTRODUCTION

This project was designed to implement and assess the feasibility of a unique and newly developed intervention (TEAM: **T**roop **E**ducation for **A**rmy **M**orale: Units and Individuals Working Together). TEAM is designed to meet the specific post deployment needs of Mortuary Affairs (MA) Soldiers for early and follow-up intervention to speed recovery, return to work and limit barriers to care through individual training, active engagement in problem solving and accessing care, enhanced buddy care and spouse support. Short and longer-term outcome in MA Soldiers are assessed. Specific aims include: 1) demonstrating the feasibility of TEAM intervention for care, support and lessening barriers to care for MA Soldiers and 2) assessing the effectiveness of TEAM on disorder (e.g., PTSD, depression), distress, health risk behaviors (e.g., alcohol or tobacco use), work function, marital conflict, and barriers to health care utilization. MA Soldiers are recruited from the $54^{th}$ and $111^{th}$ MA companies at Ft Lee, VA. We will recruit the maximum number of available post-deployment MA Soldiers. Approximately 54 MA Soldiers will become available to recruit every six months (study approved for up to 420 total subjects). We expect approximately 44 Soldiers to enroll every 6 months with approximately half randomly assigned to the TEAM intervention and half to the non-intervention comparison group. We estimate approximately N=200 (100 from each group) will complete the training and assessments. Spouses of Soldiers in the intervention group are eligible to participate in spouse workshops. We estimate 7-8 spouses in each cohort will agree to participate. TEAM has two levels of intervention: Module I. Group Training; Module II: Social Context Building. The Module I intervention will be given shortly after return from deployment (approximately 1 month). Module II will be given at 3 months and assessments will be at 1, 2, 3, 6 and 9 months. This two-pronged approach focuses on individual education while altering the social context. Each Module has an evidence informed educational/training component and a stepped care component providing education and outreach as well as resources and interactive multimodal support.

## BODY

Below is a summary of the major activities undertaken by the project team during the last year organized by the timeline in the Statement of Work (SOW).

1. **Coordination planning with site/units.** Members of the project remain in frequent contact with the Fort Lee Command and Mortuary Affairs units to maintain support for TEAM and plan for ongoing recruitment and intervention workshops. Institutional regulatory review has been obtained and maintained from the Uniformed Services University and Fort Detrick IRBs. Study clinicians and staff have completed and updated human subjects training.

2. **Personnel recruitment, hiring and training.** The project is fully staffed and members of the project have been trained on the use of the intervention materials (e.g., intervention manual, slides, handouts) as well as means of delivering the educational content (e.g., conducting workshops, use of the phone line and email service, participant safeguards).

3. **Development of short and long-term intervention and assessment.** Assessments (evaluations) have been developed for all assessment periods for intervention and control groups. Prior to finalization, assessments were reviewed by a project consultant for utility and ease of understanding. Intervention materials for Soldiers in the intervention group and participating spouses have been developed. Materials include a detailed intervention training manual for trainers, Power Point slides, handouts and a dedicated website. The intervention's educational content includes skills for care of self and others (buddy/spouse) and whenever possible is targeted to the special needs of MA Soldiers or spouses. The educational content (e.g., presentation material, handouts) is based on Psychological First Aid and addresses barriers to seeking care, managing resistance and accessing care. The website supports the workshop educational content and allows for viewing copies of workshop slides and handouts. A TEAM email address and a toll free 1-866 telephone line have been established for purposes of educational support of Soldiers in the intervention group and participating spouses.

4. **Develop participant tracking system.** A data base structure for data entry and organization of recruitment and tracking has been built.

5. **Feasibility study and recruitment coordination.** Assessment and intervention materials (e.g., intervention manual, handouts) were reviewed by a consultant prior to finalization. Pilot testing of all aspects of TEAM materials, procedures and logistics is complete. Fort Lee Command and Mortuary Affairs units support the TEAM program and are cooperative in arranging availability of subjects and space for conducting workshops at Fort Lee.

6. **Intervention and assessments, ongoing data preparation.** Recruitment of the first cohort of subjects (*n*=21; 11 in intervention group, 10 in control group) began in July 2009 and they completed their final assessment in June 2010. TEAM intervention materials, assessments, procedures and logistics were evaluated and optimized throughout cohort 1. Cohort 2 (*n*=31; 16 intervention, 15 control) was recruited in December 2009 and completed their final survey in September 2010. Cohort 3 (*n*=23; 12 intervention, 11 control) was recruited in June 2010 and completed their final survey in January 2011. Cohort 4 (*n*=12; 7 intervention, 5 control) was recruited in November 2010 and

completed their final survey in October 2011. Cohort 5 (*n*=3; 2 intervention, 1 control) was recruited in May 2011 and completed their final survey in April 2012. Cohort 6 (*n*=4; 4 intervention, 0 control) was recruited in October 2011 and completed their final survey in July 2012. Cohort 7 (*n*=11; 7 intervention, 4 control) was recruited in April 2012 and is anticipated to complete their final survey in January 2013. Spouse participation has been lower than anticipated. To date, 105 Soldiers and 1 spouse have participated in TEAM. Assessment data collected to date have been entered into the subject-tracking database.

7. **Complete subject recruitment, intervention and assessment.** Subject recruitment is ongoing at this time.

8. **Data preparation.** Data collection continues at this time. Preparation of the existing data for statistical analysis including inputting data into the SPSS database, cleaning data and assessing data quality is in progress.

9. **Preparation for project conference.** To be completed.

10. **Data analysis.** Frequency counts have been conducted as part of data cleaning. Frequency counts of initial responses to questions regarding probable PTSD and probable depression as well as the helpfulness of the TEAM program were totaled. Results of these preliminary analyses were used in poster presentations (see Appendices A-N). Preliminary mixed modeling analyses were performed looking at PCL-17 and PHQ-9 scores over time and these analyses have not been presented.

11. **Final project conference.** To be completed.

12. **Preparation and delivery/distribution of final report.** To be completed.

## KEY RESEARCH ACCOMPLISHMENTS

- Development and finalization of a multimodal educational intervention program for Soldiers returning from deployment and their spouses.
- Development of a supportive relationship with Fort Lee Command and Mortuary Affairs units for recruitment of subjects and delivery of the TEAM program.

- Recruitment of seven cohorts (N=105 Soldiers) to date.

- Development of a database for tracking subjects and statistical analysis.

## REPORTABLE OUTCOMES

Posters based on the TEAM study have been presented at professional meetings (see Appendices A-N for abstracts and mini-posters).

Biggs, Q. M., Fullerton, C. S., Benedek, D. M., McCarroll, J. E., Newby, J. H., & Ursano, R. J. Early care for psychological trauma: Innovations in teaching and delivery. 4th Annual Conference on Neurobiology of Amygdala and Stress: Molecules in a Fearful Mind, USUHS, Bethesda, MD, April 2009.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Benedek, D. M., Newby, J. H., & Ursano, R. J. Early intervention for posttraumatic stress disorder in Mortuary Affairs Soldiers. Research Week, USUHS, Bethesda, MD, May 2009.

Biggs, Q. M., Fullerton, C. S., Benedek, D. M., McCarroll, J. E., Newby, J. H., & Ursano, R. J. Early care for psychological trauma: Innovations in teaching and delivery. Education Day 2009, USUHS, Bethesda, MD, June 2009.

Fullerton, C. S., Ursano, R. J., Benedek, D. M., McCarroll, J. E., Biggs, Q. M., Zatzick, D. F., Newby, J. H., Kao, T. C., & Karpel, H. M. Mortuary Affairs Soldiers: Early intervention and altering barriers to care for traumatic stress and PTSD. Military Health Research Forum, Kansas City, MO, September 2009.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Benedek, D. M., Newby, J. H., & Ursano, R. J. Early intervention for posttraumatic stress disorder in Mortuary Affairs Soldiers. International Society for Traumatic Stress Studies Annual Meeting, Atlanta, GA, November 2009.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., & Ursano, R. J. Early educational intervention for Mortuary Affairs Soldiers post deployment: Preliminary results. 5th Annual Conference on Neurobiology of Amygdala, Stress and PTSD: How stress shapes the mind, USUHS, Bethesda, MD, April 2010.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., & Ursano, R. J. Early educational intervention for Mortuary Affairs Soldiers post deployment: Preliminary results. Research Week, USUHS, Bethesda, MD, May 2010.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Gray, C., Santiago, P., Newby, J. H., Benedek, D. M., Kodsy, N. T., Riley, S. N., Spiegel, C. A., & Ursano, R. J. TEAM: an early educational intervention for Mortuary Affairs Soldiers post deployment; preliminary results from the first three cohorts. International Society for Traumatic Stress Studies Annual Meeting, Montreal, Canada, November 2010.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., Benedek, D. M., Newby, J. H., Riley, S. N., Spiegel, C. A., Kodsy, N. T., & Ursano, R. J. Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year. 6th Annual Conference on Amygdala, Stress and PTSD: Fear in the Human Mind, USUHS, Bethesda, MD, April 2011.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., Benedek, D. M., Newby, J. H., Riley, S. N., Spiegel, C. A., Kodsy, N. T., & Ursano, R. J. Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year. Research Week, USUHS, Bethesda, MD, May 2011.

Gray, C., Fullerton, C. S., Biggs, Q. M., McCarroll, J. E., Santiago, P., Newby, J. H., Riley, S. N., Kodsy, N. T., Spiegel, C. A., & Ursano, R. J. Empirical evidence for a Psychological First Aid-based intervention in soldiers post-deployment. American Psychological Association Annual Meeting, Washington DC, August 2011.

Biggs, Q. M., Fullerton, C. S., Gray, C., McCarroll, J. E., Benedek, D. M., Santiago, P., & Ursano, R. J. Evidence for TEAM: A post deployment Psychological First Aid-based education program for U.S. Army Mortuary Affairs Soldiers. 4th Annual Trauma Spectrum Conference, National Institutes of Health, Bethesda, MD, December 2011.

Cox, D., Fullerton, C. S., Biggs, Q. M., McCarroll, J. E., Stuppy, A., Kansky, J., & Ursano, R. J. Troop Educational for Army Morale (TEAM): A post deployment educational program for Mortuary Affairs Soldiers; results from the first two years. 7th Annual Conference on Amygdala, Stress and PTSD: Recovery From Stress, USUHS, Bethesda, MD, April 2012.

Biggs, Q. M., Fullerton, C. S., Cox, D., McCarroll, J. E., Kansky, J., Stuppy, A., & Ursano, R. J. Troop Educational for Army Morale (TEAM): A post deployment educational program for Mortuary Affairs Soldiers; results from the first two years. Research Days, USUHS, Bethesda, MD, May 2012.

## CONCLUSION

The study is in the recruitment, data collection, and intervention phase. Seven cohorts have been recruited thus far. Data collected to date has been entered into the project database. All aspects of this project are progressing as planned.

## REFERENCES

No references were cited in this Annual Report.

## APPENDICES

Appendix A: Abstract and poster titled Early Care for Psychological Trauma: Innovations in Teaching and Delivery

Appendix B: Abstract and poster titled Early Intervention for Posttraumatic Stress Disorder in Mortuary Affairs Soldiers

Appendix C: Abstract and poster titled Early Care for Psychological Trauma: Innovations in Teaching and Delivery

Appendix D: Abstract and poster titled Early Intervention and Altering Barriers to Care for Traumatic Stress and PTSD

Appendix E: Abstract and poster titled Early Intervention for Posttraumatic Stress Disorder in Mortuary Affairs Soldiers

Appendix F: Abstract and poster titled Early Educational Intervention for Mortuary Affairs Soldiers Post Deployment: Preliminary Results

Appendix G: Abstract and poster titled Early Educational Intervention for Mortuary Affairs Soldiers Post Deployment: Preliminary Results

Appendix H: Abstract and poster titled TEAM: an early educational intervention for Mortuary Affairs Soldiers post deployment; preliminary results from the first three cohorts

Appendix I: Abstract and poster titled Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year

Appendix J: Abstract and poster titled Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers;

## Appendix A

# Early Care for Psychological Trauma: Innovations in Teaching and Delivery

Quinn M. Biggs, Ph.D., M.P.H.
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## Abstract

Populations exposed to traumatic events (e.g., war, disaster, terrorism) are at increased risk for posttraumatic distress and adjustment difficulties. It is critical for health care professionals and others who work with trauma-exposed populations to know and apply the current standard of early trauma care. A new educational intervention program based on evidence informed principles of Psychological First Aid (PFA) and Cognitive Behavioral Therapy (CBT) has been developed to address specific post-trauma needs. PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through five key principles: 1) physical and psychological safety, 2) calming, 3) connectedness, 4) self-efficacy and 5) hope/optimism. CBT is an approach to altering the thoughts and beliefs that lead to negative emotions and has been shown to prevent and treat posttraumatic stress disorder when administered early after trauma exposure. The intervention program involves individual skills training, active engagement in problem solving, exploring barriers to healthcare utilization and building and integrating resources within the home (e.g., spouse support) and occupational environment (e.g., coworker support). Spouses and coworkers can be offered an equivalent intervention program to improve their ability to understand and support the needs of the trauma-exposed individual as well as to meet their own specific needs for support. Participants are trained to 1) develop self-care skills and healthy cognitions, 2) recognize when someone needs care, 3) provide early support to foster rapid recovery and adjustment and 4) recognize barriers to care and promote health care utilization when needed. The intervention is delivered through group workshops, handouts, a website and toll-free phone information line. The impact of this new educational intervention program is being assessed with a group of high risk U.S. Army Mortuary Soldiers upon their return from deployment.

# EARLY CARE FOR PSYCHOLOGICAL TRAUMA: INNOVATIONS IN TEACHING AND DELIVERY

**Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., Dave Benedek, M.D.,**
**James McCarroll, Ph.D., M.P.H., John H. Newby, Ph.D., M.S.W., Robert J. Ursano, M.D.**

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## BACKGROUND

Exposure to traumatic events such as war, terrorism, natural disasters, motor vehicle collisions and assault can cause considerable psychological distress, psychiatric disorders, impaired functioning and an increase in health risk behaviors (e.g., use of alcohol or tobacco). For example, rates of posttraumatic stress disorder (PTSD), depression and alcohol misuse were as high as 19%, 13% and 30%, respectively, in Soldiers returning from Iraq and Afghanistan[1]. Similarly, rates of PTSD and depression were 22% and 13%, respectively, in disaster workers 13 months after responding to an airplane crash[2]. The burden of disease caused by traumatic events can interfere with an individual's ability to function in the work and home environment and affect the family. Often, individuals exposed to trauma do not seek help for their problems[1].

## NEW EDUCATIONAL INTERVENTION

### A New Educational Intervention Program

**Primary Objective:** Help trauma exposed individuals increase coping in the initial weeks and months after a traumatic event
**Specific Aims:** Speed recovery, decrease time to return to work, and limit barriers to healthcare utilization
**Components:** Education and individual skills training, active engagement in problem solving and accessing healthcare, and tailoring needs and resources

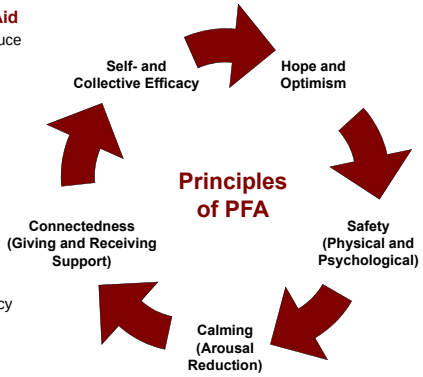
The intervention builds individual self-care skills and skills for supporting others within the individual's unique social context. The program integrates resources within the home and work environment to enhance the natural role of spouse and buddy support. Spouses and buddies are offered an equivalent intervention program including all workshops, resources and self-care and support components. The intervention is unique in that it is based on the evidence informed principles of Psychological First Aid (PFA)[3-5] and Cognitive Behavioral Therapy (CBT). The intervention is education-based and NOT mental or physical health treatment.

## EVIDENCE INFORMED PRINCIPLES

### Psychological First Aid

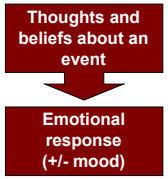
PFA[3-5] is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism




### Cognitive-Behavioral Therapy

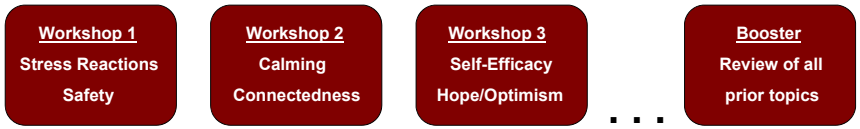
CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure[6].




## METHODS OF DELIVERY

### Methods of Delivery

- Stepped collaborative care model[7] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Address specific concerns in workshops via index cards
- Informational website (training materials, resources)
- Toll-free telephone information line
- Email service
- Referral resources
- Spouse and buddy support




## TRAINING GOALS

### Training Goals

The intervention focuses on the education and training of trauma exposed individuals and their spouses and buddies to:

- Increase adaptive coping in response to symptoms of stress
- Identify when an individual is in need of care
- Develop individual self-care skills and healthy cognitions
- Improve communication skills and build supportive relationships
- Provide early support to foster rapid recovery
- Address health risk behaviors (e.g., alcohol, tobacco)
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization

Currently, this intervention is being offered to U.S. Army Mortuary Affairs soldiers and their spouses at Fort Lee, VA. Shortly after return from deployment to Iraq and Afghanistan, Soldiers attend an introduction to the intervention. Workshops 1, 2 and 3 follow at 30, 60 and 90 days from return from deployment and the booster takes place at 6 months. Outcomes including rates of posttraumatic distress and disorders, impaired functioning and healthcare utilization are assessed throughout the study.

## SUMMARY

- Exposure to traumatic events increases the risk of psychological distress, psychiatric disorders and health risk behaviors
- A new educational intervention uses evidence informed principles of psychological first aid and cognitive-behavioral therapy as well as a stepped care model of support and a concierge-type service to address recovery from traumatic events
- The intervention enhances the natural role of spouse and buddy support and addresses barriers to healthcare utilization
- Interventions of this type are in critical need due to the high number of soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low rate of utilizing needed mental healthcare[1]
- Principles of the educational intervention are relevant to all branches of the military, disaster workers, first responders and others exposed to high demand and risky environments

References:
[1] Hoge CW et al. (2004) Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *NEJM, 351*, 13-22.
[2] Fullerton CS et al. (2004). Acute stress disorder, posttraumatic stress disorder, and depression in disaster or rescue workers. *Am J Psychiatry, 161*, 1370-1376.
[3] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70*, 345-349.
[4] Hobfoll SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70*, 283-315.
[5] National Child Traumatic Stress Network and National Center for PTSD, *Psychological First Aid: Field Operations Guide, 2nd Ed.* 2006. Available: www.nctsn.org.
[6] Bryant RA (2005). Psychosocial approaches to acute stress reactions. *CNS Spectrums, 10*, 116-122.
[7] Zatzick D et al. (2004). A randomized effectiveness trial of stepped collaborative care for acutely injured trauma survivors. *Archives of General Psychiatry, 61*, 498-506.

## Appendix B

### Early Intervention for Posttraumatic Stress Disorder in Mortuary Affairs Soldiers

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### Abstract

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, hope/optimism) delivered through workshops, handouts, a website and phone line. Soldiers and their spouses learn to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify barriers to care and promote health care utilization when needed. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Significant reductions in arousal, distress and functional impairment as well as increases in healthcare utilization are anticipated. Data are not yet available. Findings will increase our knowledge of PFA based early intervention and PTSD symptomology. Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

# EARLY INTERVENTION FOR POSTTRAUMATIC STRESS DISORDER IN MORTUARY AFFAIRS SOLDIERS

**Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James McCarroll, Ph.D., M.P.H., Dave Benedek, M.D., John H. Newby, Ph.D., M.S.W., Robert J. Ursano, M.D.**

*Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD*

## BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of probable posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care.

- 19.9% Probable PTSD
- 71.6% Moderate to high stress
- 57.6% Spouse or significant other experiencing moderate to high stress
- 24.6% Seven or more bad mental health days in the past month
- 27.7% In need of medical care but did not obtain help

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale)**: TEAM is a new educational intervention program to help MA Soldiers and their spouses and families reduce distress and foster adaptive coping in the initial weeks and months after return from deployment. TEAM is designed to speed recovery, decrease time to return to work and limit barriers to healthcare utilization. TEAM is currently being offered to Mortuary Affairs soldiers and their spouses at Fort Lee, VA. Components of TEAM include:

- Building individual self-care skills and skills for supporting others
- Integrating resources within the social context of home and unit to enhance the natural role of spouse and buddy support
- Education and skills training, active problem solving, engagement in accessing healthcare, and tailoring needs and resources
- Offering spouses an equivalent intervention including all workshops, resources and self-care and support components

**Methods and Evaluation:** MA Soldiers, randomized to the TEAM intervention or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Probable PTSD, distress, functional impairment, healthcare utilization and utilization of the TEAM program's resources (e.g., website) are assessed. Spouses are not assessed.

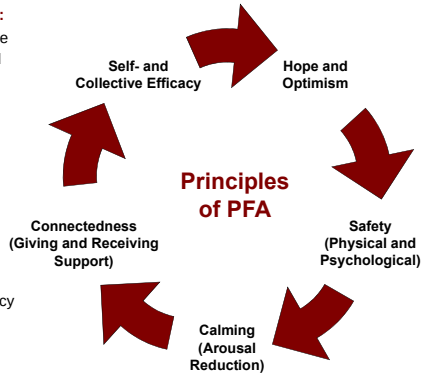
**Assessment of TEAM:** Outcomes for Soldiers in the intervention group are compared to the non-intervention group. Significant reductions in arousal, distress and functional impairment as well as increases in healthcare utilization are anticipated. Data are not yet available.

## EVIDENCE INFORMED PRINCIPLES

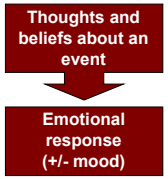
**Basis of the Intervention**: TEAM is based on the evidence informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4]. TEAM is education-based and NOT mental or physical health treatment.

**Psychological First Aid:**
PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism



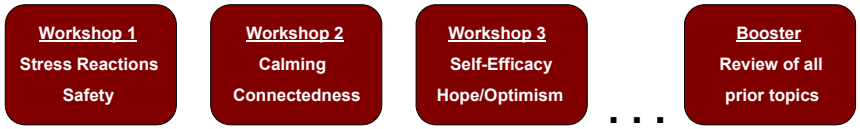

**Cognitive-Behavioral Therapy:**
CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure.




## METHODS OF DELIVERY

**Methods of Delivery**

- Stepped collaborative care model[5] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Address specific concerns in workshops via index cards
- Informational website (training materials, resources)
- Toll-free telephone information line
- Email service
- Referral resources
- Support through spouse and buddy




**Training Timeline:** Shortly after return from deployment, Soldiers attend an introduction to the intervention. Workshops 1, 2 and 3 follow at 30, 60 and 90 days from return from deployment and the booster takes place at 6 months. Outcomes including rates of posttraumatic distress and disorders, impaired functioning and healthcare utilization are assessed throughout the intervention.

## TRAINING GOALS

**Training Goals:** TEAM focuses on the education and training of Soldiers and their spouses to:

- Increase adaptive coping in response to symptoms of stress
- Identify when an individual is in need of care
- Develop individual self-care skills and healthy cognitions
- Improve communication skills and build supportive relationships
- Provide early support to foster rapid recovery
- Address health risk behaviors (e.g., use of alcohol or tobacco)
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization

## SUMMARY

- Mortuary Affairs Soldiers returning from deployment have high rates risk of psychological distress and adjustment difficulties
- TEAM, a new educational intervention uses evidence informed principles of PFA and CBT therapy as well as a stepped care model of support and a concierge-type service to address recovery and adaptation
- The intervention enhances the natural role of spouse and buddy support and addresses barriers to healthcare utilization
- Interventions of this type are in critical need due to the high number of soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low utilization rate of needed mental healthcare[6]
- Findings will increase our knowledge of PFA based early intervention and PTSD symptomology
- Principles of the TEAM intervention are relevant to other branches of the military, first responders, disaster workers and others exposed to the dead

References:
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70*, 345-349.
[2] Hobfoll SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70*, 283-315.
[3] National Child Traumatic Stress Network and National Center for PTSD, *Psychological First Aid: Field Operations Guide, 2nd Ed.* 2006. Available: www.nctsn.org.
[4] Bryant RA (2005). Psychosocial approaches to acute stress reactions. *CNS Spectrums, 10*, 116-122.
[5] Zatzick D et al. (2004). A randomized effectiveness trial of stepped collaborative care for acutely injured trauma survivors. *Archives of General Psychiatry, 61*, 498-506.
[6] Hoge CW et al. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351*, 13-22.

## Appendix C

## Early Care for Psychological Trauma: Innovations in Teaching and Delivery

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### Abstract

Populations exposed to traumatic events (e.g., war, disaster, terrorism) are at increased risk for posttraumatic distress and adjustment difficulties. It is critical for health care professionals and others who work with trauma-exposed populations to know and apply the current standard of early trauma care. A new educational intervention program based on evidence informed principles of Psychological First Aid (PFA) and Cognitive Behavioral Therapy (CBT) has been developed to address specific post-trauma needs. PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through five key principles: 1) physical and psychological safety, 2) calming, 3) connectedness, 4) self-efficacy and 5) hope/optimism. CBT is an approach to altering the thoughts and beliefs that lead to negative emotions and has been shown to prevent and treat posttraumatic stress disorder when administered early after trauma exposure. The intervention program involves individual skills training, active engagement in problem solving, exploring barriers to healthcare utilization and building and integrating resources within the home (e.g., spouse support) and occupational environment (e.g., coworker support). Spouses and coworkers can be offered an equivalent intervention program to improve their ability to understand and support the needs of the trauma-exposed individual as well as to meet their own specific needs for support. Participants are trained to 1) develop self-care skills and healthy cognitions, 2) recognize when someone needs care, 3) provide early support to foster rapid recovery and adjustment and 4) recognize barriers to care and promote health care utilization when needed. The intervention is delivered through group workshops, handouts, a website and toll-free phone information line. The impact of this new educational intervention program is being assessed with a group of high risk U.S. Army Mortuary Soldiers upon their return from deployment.

# EARLY CARE FOR PSYCHOLOGICAL TRAUMA: INNOVATIONS IN TEACHING AND DELIVERY

**Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., Dave Benedek, M.D.,**
**James McCarroll, Ph.D., M.P.H., John H. Newby, Ph.D., M.S.W., Robert J. Ursano, M.D.**

***Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD***

## BACKGROUND

Exposure to traumatic events such as war, terrorism, natural disasters, motor vehicle collisions and assault can cause considerable psychological distress, psychiatric disorders, impaired functioning and an increase in health risk behaviors (e.g., use of alcohol or tobacco). For example, rates of posttraumatic stress disorder (PTSD), depression and alcohol misuse were as high as 19%, 13% and 30%, respectively, in Soldiers returning from Iraq and Afghanistan[1]. Similarly, rates of PTSD and depression were 22% and 13%, respectively, in disaster workers 13 months after responding to an airplane crash[2]. The burden of disease caused by traumatic events can interfere with an individual's ability to function in the work and home environment and affect the family. Often, individuals exposed to trauma do not seek help for their problems[1].

## NEW EDUCATIONAL INTERVENTION

### A New Educational Intervention Program

**Primary Objective:** Help trauma exposed individuals increase coping in the initial weeks and months after a traumatic event
**Specific Aims:** Speed recovery, decrease time to return to work, and limit barriers to healthcare utilization
**Components:** Education and individual skills training, active engagement in problem solving and accessing healthcare, and tailoring needs and resources

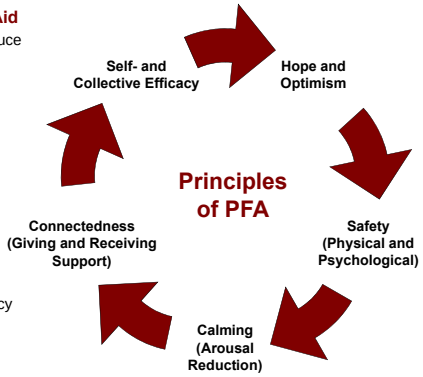
The intervention builds individual self-care skills and skills for supporting others within the individual's unique social context. The program integrates resources within the home and work environment to enhance the natural role of spouse and coworker support. Spouses and coworkers are offered an equivalent intervention program including all workshops, resources and self-care and support components. The intervention is unique in that it is based on the evidence informed principles of Psychological First Aid (PFA)[3-5] and Cognitive Behavioral Therapy (CBT). The intervention is education-based and NOT mental or physical health treatment.

## EVIDENCE INFORMED PRINCIPLES

### Psychological First Aid

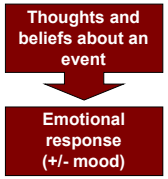
PFA[3-5] is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism




### Cognitive-Behavioral Therapy

CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure[6].




## METHODS OF DELIVERY

### Methods of Delivery

- Stepped collaborative care model[7] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Address specific concerns in workshops via index cards
- Informational website (training materials, resources)
- Toll-free telephone information line
- Email service
- Referral resources
- Spouse and coworker support

**Workshop 1** — Stress Reactions, Safety
**Workshop 2** — Calming, Connectedness
**Workshop 3** — Self-Efficacy, Hope/Optimism
. . .
**Booster** — Review of all prior topics

## TRAINING GOALS

### Training Goals

The intervention focuses on the education and training of trauma exposed individuals and their spouses and coworkers to:

- Increase adaptive coping in response to symptoms of stress
- Identify when an individual is in need of care
- Develop individual self-care skills and healthy cognitions
- Improve communication skills and build supportive relationships
- Provide early support to foster rapid recovery
- Address health risk behaviors (e.g., use of alcohol or tobacco)
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization

The intervention will be piloted with U.S. Army Mortuary Affairs soldiers at Fort Lee, VA and their spouses. Shortly after return from deployment, soldiers attend an introduction and are randomized to workshop or usual services (control) groups. Workshops 1, 2 and 3 follow at 30, 60 and 90 days and the booster at 180 days. Questionnaire assessments will be conducted at 30, 60, 90, 180 and 270 days. Workshop and usual services groups will be compared on outcomes including rates of posttraumatic distress and disorders, impaired functioning, healthcare utilization and utilization of program services (e.g., website, email, telephone info line).

## SUMMARY

- Exposure to traumatic events increases the risk of psychological distress, psychiatric disorders and health risk behaviors
- A new educational intervention uses evidence informed principles of psychological first aid and cognitive-behavioral therapy as well as a stepped care model of support and a concierge-type service to address recovery from traumatic events
- The intervention enhances the natural role of spouse and coworker support and addresses barriers to healthcare utilization
- Interventions of this type are in critical need due to the high number of soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low rate of utilizing needed mental healthcare[1]
- Principles of the educational intervention are relevant to all branches of the military, disaster workers, first responders and others exposed to high demand and risky environments

References:
[1] Hoge CW et al. (2004) Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *NEJM, 351*, 13-22.
[2] Fullerton CS et al. (2004). Acute stress disorder, posttraumatic stress disorder, and depression in disaster or rescue workers. *Am J Psychiatry, 161*, 1370-1376.
[3] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70*, 345-349.
[4] Hobfoll SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70*, 283-315.
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[7] Zatzick D et al. (2004). A randomized effectiveness trial of stepped collaborative care for acutely injured trauma survivors. *Archives of General Psychiatry, 61*, 498-506.

## Appendix D

### Mortuary Affairs Soldiers: Early Intervention and Altering Barriers to Care for Traumatic Stress and PTSD

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Robert J. Ursano, M.D.[1]
David M. Benedek, M.D.[1]
James E. McCarroll, Ph.D., M.P.H.[1]
Quinn M. Biggs, Ph.D., M.P.H.[1]
Douglas F. Zatzick, M.D.[2]
John H. Newby, Ph.D., M.S.W.[1]
Tzu-Cheg Kao, Ph.D.[1]
Heather M. Karpel, B.A[1]

[1]Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD; [2]University of Washington School of Medicine, Seattle, WA

### Abstract

**Background and Objectives:** U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan have substantial rates of Posttraumatic Stress Disorder (PTSD), depression, psychological distress and health risk behaviors (e.g., alcohol or tobacco use). Exposure to death and combat increases the risk for posttraumatic distress and adjustment difficulties. After deployment, MA Soldiers report high rates of personal and family stress, functional impairment and needing but not obtaining health care. Support from family, co-workers and supervisors has been found to be beneficial in the weeks and months post-deployment. A newly developed educational intervention, TEAM (Troop Education for Army Morale), is designed to address specific post-deployment needs of MA soldiers. TEAM involves individual skills training, active engagement in problem solving, exploring barriers to healthcare utilization and building and integrating resources within the unit (e.g., buddy care) and home (e.g., spouse support). TEAM is based on the evidence informed principles of Psychological First Aid (PFA) and Cognitive Behavioral Therapy (CBT). PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through key principles: 1) physical and psychological safety, 2) calming, 3) connectedness, 4) self-efficacy and 5) hope/optimism. CBT is an approach to altering the thoughts and beliefs that lead to negative emotions and can prevent and treat PTSD when administered early after trauma exposure. Spouses of soldiers participating in TEAM are offered an equivalent intervention tailored to the specific needs of spouses. Soldiers and spouses are trained to 1) develop self-care skills and healthy cognitions, 2) recognize when a soldier needs care, 3) provide early support to foster rapid recovery and adjustment and 4) recognize barriers to care and promote health care utilization when needed. The intervention is delivered through group workshops, handouts, a website and toll-free phone information line.

**Methods:** TEAM is a longitudinal, randomized controlled trial. MA Soldiers are recruited from the 54th and 111th MA companies at Ft Lee, VA (estimated N=480) within 2 weeks of return from deployment. Questionnaire assessments are conducted at 1, 2, 3, 6, and

9 months post deployment. TEAM participants are compared to MA soldiers not receiving the TEAM intervention. Study goals include demonstrating the feasibility of TEAM for care and support of MA soldiers. Primary outcomes include assessing psychiatric disorder (e.g., PTSD, depression), psychological distress, health risk behaviors, quality of life, work function, marital conflict and barriers to health care utilization.

**Results/Conclusions:** Not yet available.

**Impact Statement:** This study has implications for development, assessment and feasibility of early intervention with MA soldiers post-deployment. Our findings will increase our knowledge of resilience and the contribution of soldier education and the environment (i.e., spouse and buddy care) to recovery and adjustment post-deployment. Our study has broader implications for intervention with first responders and other disaster workers exposed to the dead. Findings from this study and principles of the TEAM intervention are relevant to all branches of the military and the community that must sustain first responders in high stress environments including deployments and disasters.

# MORTUARY AFFAIRS SOLDIERS: EARLY INTERVENTION AND ALTERING BARRIERS TO CARE FOR TRAUMATIC STRESS AND PTSD

Carol S. Fullerton, Ph.D.[1], Robert J. Ursano, M.D.[1], David M. Benedek, M.D.[1], James McCarroll, Ph.D., M.P.H.[1], Quinn M. Biggs, Ph.D., M.P.H.[1], Douglas F. Zatzick, M.D.[2], John H. Newby, Ph.D., M.S.W.[1], Tzu-Cheg Kao, Ph.D.[1], Heather M. Karpel, B.A.[1] **

*[1]Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD; [2]University of Washington School of Medicine, Seattle, WA*

## BACKGROUND

**U.S. Army Mortuary Affairs Soldiers (MA)** returning from Iraq and Afghanistan have substantial rates of posttraumatic stress disorder (PTSD), depression, psychological distress, and health risk behaviors (e.g., alcohol or tobacco use). Exposure to death and combat increases the risk for posttraumatic distress and adjustment difficulties. After deployment, MA Soldiers report high rates of personal and family stress, functional impairment and needing but not obtaining health care. Support from family, co-workers and supervisors has been found to be beneficial after deployment.

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale)**: TEAM is a new educational intervention program to help MA Soldiers and their spouses and families reduce distress and foster adaptive coping in the initial weeks and months after deployment. TEAM is designed to speed recovery, decrease time to return to work and limit barriers to healthcare utilization. TEAM components include:

- Building individual self-care skills and skills for supporting others
- Integrating resources within the social context of home and unit to enhance the natural role of spouse and buddy support
- Education and skills training, active problem solving, engagement in accessing healthcare, and tailoring needs and resources
- Offering spouses an equivalent intervention including all workshops, resources and self-care and support components

**Methods and Assessment:** TEAM is currently being offered to MA Soldiers (estimated N=480) and their spouses at Fort Lee, VA. MA Soldiers, randomized to the TEAM intervention or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Primary outcomes include assessing psychiatric disorder (e.g., PTSD, depression), psychological distress, health risk behaviors, quality of life, work function, marital conflict and barriers to healthcare utilization. Participants' use of the TEAM program's resources (e.g., website, phone line) are also assessed. Spouses are not assessed.

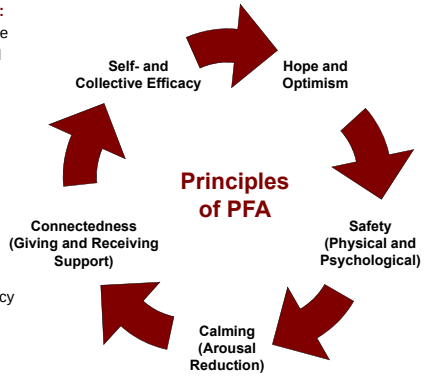
**Evaluation of the TEAM program:** Outcomes for Soldiers in the intervention group are compared to the non-intervention group. Study goals include demonstrating the feasibility of TEAM for care and support of MA Soldiers. Significant reductions in arousal, distress and functional impairment as well as increases in healthcare utilization are anticipated. Data are not yet available.

## EVIDENCE INFORMED PRINCIPLES

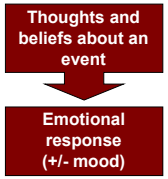
**Basis of the Intervention**: TEAM is based on the evidence informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4]. TEAM is education-based and NOT mental or physical health treatment.

**Psychological First Aid:**
PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism




**Cognitive-Behavioral Therapy:**
CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure.




## METHODS OF DELIVERY

**Methods of Delivery**

- Stepped collaborative care model[5] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Address specific concerns in workshops via index cards
- Informational website (training materials, resources)
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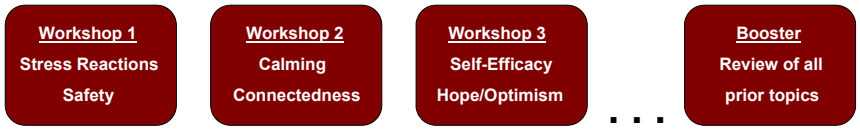
- Referral resources
- Support through spouse and buddy




**Training Timeline:** Shortly after return from deployment, Soldiers attend an introduction to the intervention. Workshops 1, 2 and 3 follow at 30, 60 and 90 days from return from deployment and the booster takes place at 6 months. Outcomes including rates of posttraumatic distress and disorders, work function and healthcare utilization are assessed throughout the intervention.

## TRAINING GOALS

**Training Goals:** TEAM focuses on the education and training of Soldiers and their spouses to:

- Increase adaptive coping in response to symptoms of stress
- Identify when an individual is in need of care
- Develop individual self-care skills and healthy cognitions
- Improve communication skills and build supportive relationships
- Provide early support to foster rapid recovery
- Address health risk behaviors (e.g., use of alcohol or tobacco)
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization

## SUMMARY AND IMPACT

- Mortuary Affairs Soldiers returning from deployment have high rates risk of psychological distress and adjustment difficulties
- TEAM, a new educational intervention, uses evidence informed principles of PFA and CBT therapy as well as a stepped care model of support and a concierge-type service to address recovery and adaptation
- The intervention enhances the natural role of spouse and buddy support and addresses barriers to healthcare utilization
- Interventions of this type are in critical need due to the high number of soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low utilization rate of needed mental health care[6]
- Findings will increase our knowledge of PFA-based early intervention and PTSD symptomology
- Principles of the TEAM intervention are relevant to other branches of the military, first responders, disaster workers and others exposed to the dead

** *We wish to acknowledge additional members of our Intervention Team: LCDR Patcho Santiago, M.D., M.P.H., Christine Gray, M.P.H., Stephanie N. Riley, B.S., and Natalie T. Kodsy, M.A.*

References:
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70,* 345-349.
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## Appendix E

### Early Intervention for Posttraumatic Stress Disorder in Mortuary Affairs Soldiers

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Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814

### Abstract

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, hope/optimism) delivered through workshops, handouts, a website and phone line. Soldiers and their spouses learn to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify barriers to care and promote health care utilization when needed. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. We present preliminary data on the impact of TEAM to specific PTSD criteria, work function and health care utilization. Significant reductions in arousal, distress and functional impairment are anticipated. Findings will increase our knowledge of PFA based early intervention and PTSD symptomology. Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

# EARLY INTERVENTION FOR POSTTRAUMATIC STRESS DISORDER IN MORTUARY AFFAIRS SOLDIERS

Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James McCarroll, Ph.D., M.P.H., David M. Benedek, M.D.,
John H. Newby, Ph.D., M.S.W., Robert J. Ursano, M.D. **

*Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD*

## BACKGROUND

**U.S. Army Mortuary Affairs Soldiers (MA)** returning from Iraq and Afghanistan have substantial rates of posttraumatic stress disorder (PTSD), depression, psychological distress, and health risk behaviors (e.g., alcohol or tobacco use). Exposure to death and combat increases the risk for posttraumatic distress and adjustment difficulties. After deployment, MA Soldiers report high rates of personal and family stress, functional impairment and needing but not obtaining health care. Support from family, co-workers and supervisors has been found to be beneficial after deployment.

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale)**: TEAM is a new education and skills training intervention to help MA Soldiers and their spouses and families reduce distress and foster adaptive coping in the initial weeks and months after deployment. TEAM training includes building skills for self-care and support of others (e.g., buddy care), active problem solving, engagement in accessing healthcare, and tailoring needs and resources. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support (i.e., spouses are offered an equivalent intervention and all training support).

**Methods and Assessment:** TEAM is currently being offered to MA Soldiers (estimated N=480) and their spouses at Fort Lee, VA. MA Soldiers, randomized to the TEAM intervention or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Primary outcomes include assessing psychiatric disorder (e.g., PTSD, depression), psychological distress, health risk behaviors, quality of life, work function, marital conflict and barriers to healthcare utilization. Participants' use of the TEAM program's resources (e.g., website, phone line) are also assessed. Spouses are not assessed.

**Goals:** The training of Soldiers and spouses to:

- Develop self-care skills and healthy cognitions
- Increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery

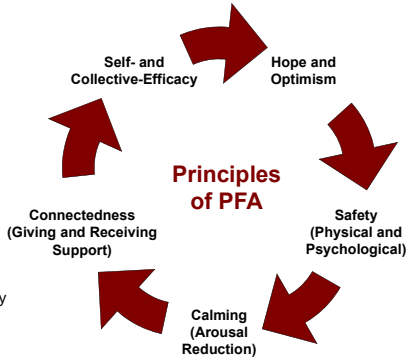
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization
- Address health risk behaviors (e.g., alcohol use)

## EVIDENCE INFORMED PRINCIPLES

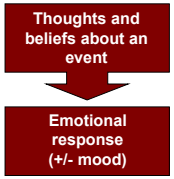
**Basis of the Intervention**: TEAM is based on the evidence informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4]. TEAM is education-based and NOT mental or physical health treatment.

**Psychological First Aid:**
PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism




**Cognitive-Behavioral Therapy:**
CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure.




## DELIVERY AND TIMELINE

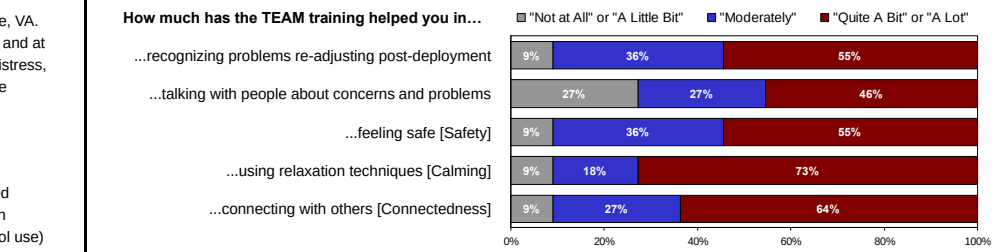
**Methods of Delivery:**

- Stepped collaborative care model[5] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Informational website (training materials, resources)
- Toll-free phone information line and email service
- Referral resources
- Support through spouse and buddy

**Workshop 1** — Stress Reactions, Safety (1 mo. post-deploy)
**Workshop 2** — Calming, Connectedness (2 mo. p.d.)
**Workshop 3** — Self-Efficacy, Hope/Optimism (3 mo. p.d.)
**Booster** — Review of all prior topics (6 mo. p.d.)

## PRELIMINARY RESULTS

**Assessments:** All Soldiers reported that "Overall, the TEAM training was helpful" (N=11). Talking with others (fellow Soldiers), learning about stress and coping, relaxation training, and the educational handouts were among the most helpful components.




**Observations:** Soldiers show interest in participating in TEAM (e.g., a Soldier came in to participate in TEAM during his leave; another requested to continue in TEAM after her separation from the Army). Anecdotal feedback has been positive (i.e., "The [calming exercise] helped me and my family by reducing my anger"). Command at Fort Lee has been very supportive of TEAM.

## SUMMARY AND IMPACT

- Mortuary Affairs Soldiers returning from deployment have high rates of psychological distress and adjustment difficulties
- TEAM, a new educational intervention, uses evidence informed principles of PFA and CBT therapy as well as a stepped care model of support and a concierge-type service to address recovery and post-deployment adaptation
- The intervention enhances the natural role of spouse and buddy support and addresses barriers to healthcare utilization
- Interventions of this type are in critical need due to the high number of soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low utilization rate of needed mental health care[6]
- Findings will increase our knowledge of PFA-based early intervention and PTSD symptomology
- Principles of the TEAM intervention are relevant to other branches of the military, first responders, disaster workers and others exposed to the dead

** *We wish to acknowledge additional members of our Intervention Team: LCDR Patcho Santiago, M.D., M.P.H., Christine Gray, M.P.H., Stephanie N. Riley, B.S., and Natalie T. Kodsy, M.A.*

References:
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70,* 345-349.
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*Funded by U.S. Army Medical Research & Materiel Command, Congressionally Directed Medical Research Program Award W81XWH-08-2-0180*

## Appendix F

### Early Educational Intervention for Mortuary Affairs Soldiers Post Deployment: Preliminary Results

Quinn M. Biggs, Ph.D., M.P.H.
Carol S. Fullerton, Ph.D.
James E. McCarroll, Ph.D., M.P.H.
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Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814

### Abstract

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, hope/optimism) delivered through workshops, handouts, a website and phone line. Soldiers and their spouses learn to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify obstacles to seeking care and promote health care utilization when needed. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. We present preliminary data on TEAM's impact on feelings of safety, use of calming techniques, and Soldiers ability to recognize problems and seek help. Findings from this study will increase our knowledge of PFA based early intervention. Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

# EARLY EDUCATIONAL INTERVENTION FOR MORTUARY AFFAIRS SOLDIERS POST DEPLOYMENT: PRELIMINARY RESULTS

**Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James McCarroll, Ph.D., M.P.H., LCDR Patcho Santiago, M.D., M.P.H., Christine Gray, M.P.H., Robert J. Ursano, M.D. ****

*Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD*

## BACKGROUND

**U.S. Army Mortuary Affairs Soldiers (MA)** returning from Iraq and Afghanistan have substantial rates of posttraumatic stress disorder (PTSD), depression, psychological distress, and health risk behaviors (e.g., alcohol or tobacco use). Exposure to death and combat increases the risk for posttraumatic distress and adjustment difficulties. After deployment, MA Soldiers report high rates of personal and family stress, functional impairment and needing but not obtaining health care. Support from family, co-workers and supervisors has been found to be beneficial after deployment.

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale)**: TEAM is a new education and skills training intervention to help MA Soldiers and their spouses and families reduce distress and foster adaptive coping in the initial weeks and months after deployment. TEAM training includes building skills for self-care and support of others (e.g., buddy care), active problem solving, engagement in accessing healthcare, and tailoring needs and resources. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support (i.e., spouses are offered an equivalent intervention and all training support).

**Methods and Assessment:** TEAM is currently being offered to MA Soldiers (estimated N=480) and their spouses at Fort Lee, VA. MA Soldiers, randomized to the TEAM intervention or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Primary outcomes include assessing psychiatric disorder (e.g., PTSD, depression), psychological distress, health risk behaviors, quality of life, work function, marital conflict and barriers to healthcare utilization. Participants' use of the TEAM program's resources (e.g., website, phone line) are also assessed. Spouses are not assessed.

**Goals:** The training of Soldiers and spouses to:

- Develop self-care skills and healthy cognitions
- Increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery

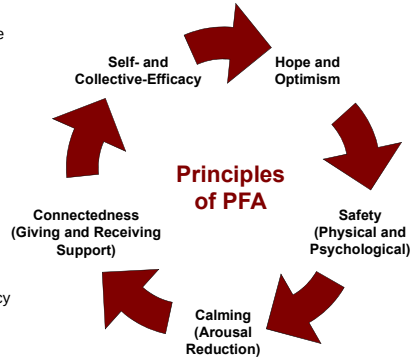
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization
- Address health risk behaviors (e.g., alcohol use)

## EVIDENCE INFORMED PRINCIPLES

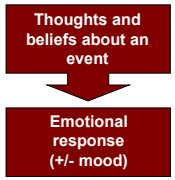
**Basis of the Intervention**: TEAM is based on the evidence informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4]. TEAM is education-based and NOT mental or physical health treatment.

**Psychological First Aid:**
PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism




**Cognitive-Behavioral Therapy:**
CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure.




## DELIVERY AND TIMELINE

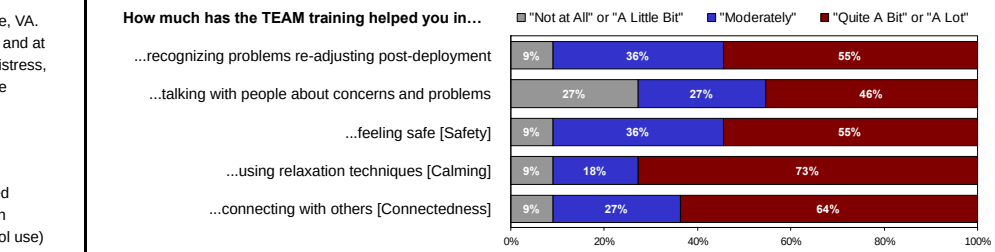
**Methods of Delivery:**

- Stepped collaborative care model[5] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Informational website (training materials, resources)
- Toll-free phone information line and email service
- Referral resources
- Support through spouse and buddy

**Workshop 1** — Stress Reactions, Safety (1 mo. post-deploy)
**Workshop 2** — Calming, Connectedness (2 mo. p.d.)
**Workshop 3** — Self-Efficacy, Hope/Optimism (3 mo. p.d.)
**Booster** — Review of all prior topics (6 mo. p.d.)

## PRELIMINARY RESULTS

**Assessments:** All Soldiers reported that "Overall, the TEAM training was helpful" (N=11). Talking with others (fellow Soldiers), learning about stress and coping, relaxation training, and the educational handouts were among the most helpful components.




**Observations:** Soldiers show interest in participating in TEAM (e.g., a Soldier came in to participate in TEAM during his leave; another requested to continue in TEAM after her separation from the Army). Anecdotal feedback has been positive (i.e., "The [calming exercise] helped me and my family by reducing my anger"). Command at Fort Lee has been very supportive of TEAM.

## SUMMARY AND IMPACT

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*** Research Team included: John H. Newby, Ph.D., M.S.W., David M. Benedek, M.D., Natalie T. Kodsy, M.A., and Stephanie N. Riley, B.S.*

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## Appendix G

# Early educational intervention for Mortuary Affairs Soldiers post deployment: preliminary results

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# EARLY EDUCATIONAL INTERVENTION FOR MORTUARY AFFAIRS SOLDIERS POST DEPLOYMENT: PRELIMINARY RESULTS

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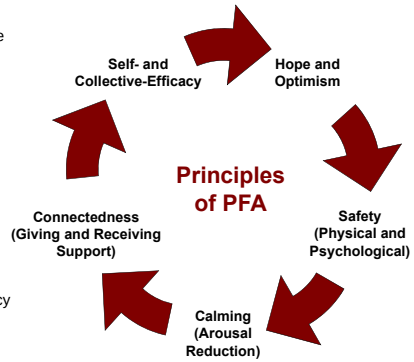


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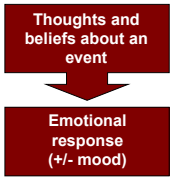


## DELIVERY AND TIMELINE

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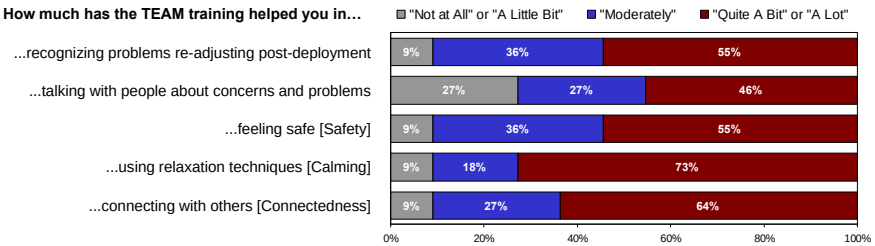


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## Appendix H

**TEAM: an early educational intervention for Mortuary Affairs Soldiers post deployment; preliminary results from the first three cohorts.**

Quinn M. Biggs, Ph.D., M.P.H.
Carol S. Fullerton, Ph.D.
James McCarroll, Ph.D., M.P.H.
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# TEAM: AN EARLY EDUCATIONAL INTERVENTION FOR MORTUARY AFFAIRS SOLDIERS POST DEPLOYMENT; PRELIMINARY RESULTS FROM THE FIRST THREE COHORTS

Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James McCarroll, Ph.D., M.P.H., Christine Gray, M.P.H., LCDR Patcho Santiago, M.D., M.P.H., John H. Newby, Ph.D., M.S.W., David M. Benedek, M.D., Natalie T. Kodsy, M.A., Stephanie N. Riley, B.S., Chad A. Spiegel, M.A., and Robert J. Ursano, M.D.

*Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD*

## BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) recover, identify, and evacuate the remains of deceased military personnel and their personal effects from Iraq and Afghanistan. Exposure to death and the combat environment increases the risk for posttraumatic distress and adjustment difficulties.

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale):** TEAM is a new education and skills training intervention to help MA Soldiers and their spouses reduce distress and foster adaptive coping in the months after deployment. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support. Spouses are offered an equivalent intervention.

**Basis of the Intervention:** TEAM training is based on the evidence-informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4].


**Psychological First Aid:** PFA is designed to reduce the distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through the principles of Safety, Calming, Connecting, Self-Efficacy, and Hope/Optimism.

**Cognitive-Behavioral Therapy:** CBT is an approach to altering thoughts and beliefs that lead to emotions. It has been shown to treat and prevent PTSD successfully when administered early after trauma exposure. However, TEAM is education-based and NOT therapy or mental health treatment.

**Delivery of Intervention:**

- Interactive group workshops
- Educational handouts
- Toll-free phone line and email service
- Website (resources, training materials)
- Referral resources
- Concierge-type service
- Stepped collaborative care model[5]
- Support through spouse and buddy

**Goals:** The training of Soldiers to:

- Develop self-care skills and increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to health care utilization
- Address health risk behaviors (e.g., alcohol use)

## METHODS

**Procedures:** MA Soldiers at Fort Lee were randomized to TEAM intervention (Workshop) or no intervention (Usual Services). Workshops held 1, 2, 3 & 6 mos. post deployment. Questionnaires completed at return from deployment and 1, 2, 3, 6 & 9 mos. Outcomes: psychiatric disorder (PTSD, depression), psychological distress, functional impairment, impact of TEAM on post deployment readjustment.

**Participants:** 75 MA Soldiers (Workshop Group N=39; Usual Services N=36)

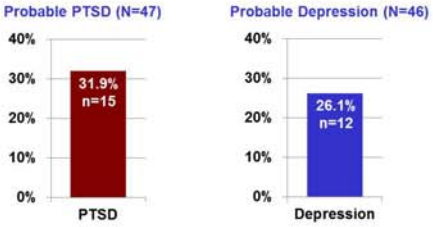
- **Gender:** 73.1% male; 26.9% female **Age:** range 19-50 years (M=28.58)
- **Education:** 1.5%<HS; 43.3% HS/GED; 50.7% some college; 4.5% bachelors
- **Rank:** 16.4%≤Private or Private First Class; 65.7% Specialist or Corporal; 17.9%≥Sergeant (all enlisted)
- **Race:** 63.6% White; 16.7% Black; 12.1% Hispanic; 4.5% American Indian or Alaskan Native; 3.0% Asian or Pacific Islander
- **Marital Status:** 68.7% married; years M=4.76; 73.3% live with their spouse

**Measures:**

- **Probable PTSD:** PTSD Checklist (PCL-17): "How much you have been bothered by each problem in the past month" (1="not at all" to 5="extremely"). Probable PTSD if total symptom score ≥50 (range 17-85) and 1 intrusion, 3 avoidance, 2 hyperarousal symptoms scored moderately or higher.
- **Probable Depression:** Patient Health Questionnaire (PHQ-9): Positive if 5 or more of 9 symptoms present "more than half the days" or "most days" in the past 2 weeks and at least 1 symptom is depressed mood or anhedonia.

## PRELIMINARY RESULTS

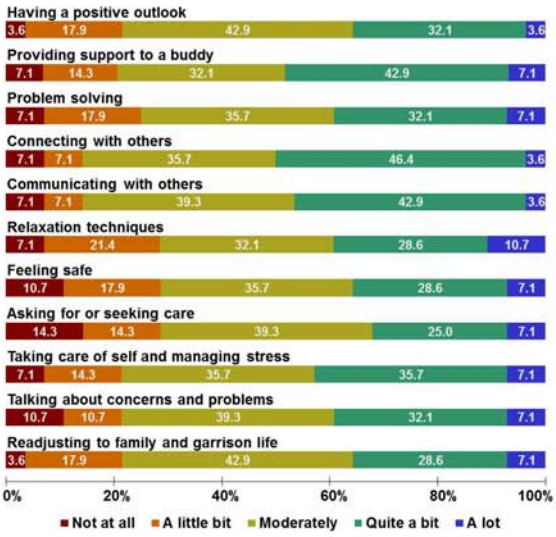
**PTSD and Depression** *(1 month post deployment)*




**Work-Related Impairment** *(reported at least half of the time, 1 mo. post deploy.; N=47)*

- 70.2% Felt fatigued
- 53.2% Lost concentration
- 40.4% Worked more slowly than usual

**Helpfulness of TEAM:** *(2-9 mos. post deployment; N=28)*




**Limitations**

- Preliminary data (2 cohorts completed, 1 in progress, 2 more cohorts expected)
- Self-selection to study and attendance at workshops
- Self-report measures

## SUMMARY AND IMPACT

- These preliminary data suggest Mortuary Affairs Soldiers returning from Iraq and Afghanistan have high rates of PTSD and depression.
- Most participants described TEAM as being "Moderately" or "Quite a bit" helpful.
- TEAM enhances the natural role of spouse and buddy support and addresses barriers to health care utilization.
- Interventions of this type are needed due to the high number of Soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low rates of mental health care utilization[6].
- Soldiers returning from deployment report benefit from Psychological First Aid- and Cognitive Behavioral Therapy-based early educational intervention.
- These findings have implications for the feasibility of this intervention with Soldiers in other branches of the military, first responders, disaster workers and others exposed to the dead.

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*Funded by U.S. Army Medical Research & Materiel Command, Congressionally Directed Medical Research Program Award W81XWH-08-2-0180*

## Appendix I

### Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year.

Quinn M. Biggs, Ph.D., M.P.H.
Carol S. Fullerton, Ph.D.
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### Abstract

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid (PFA; safety, calming, connectedness, self-efficacy, hope/optimism) delivered through workshops, handouts, a website and phone line. Soldiers learn to use self-care skills, recognize when Soldiers need care, provide support (buddy care, spouse support), identify barriers to care and promote health care utilization when needed. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Preliminary results with the first three cohorts show probable PTSD and probable depression are 31.9% and 26.1%, respectively, at one month post deployment. Work-related impairments, including working more slowly than usual, lost concentration, and fatigue, are high. On average, the TEAM program was rated as helpful in important post deployment coping areas such as recognizing problems and seeking help (social support, healthcare utilization), connecting and communicating with others, feeling safe, and using calming techniques to reduce arousal. These findings increase our knowledge of PFA based early interventions. Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

# TROOP EDUCATION FOR ARMY MORALE (TEAM) POST DEPLOYMENT EARLY EDUCATION PROGRAM FOR MORTUARY AFFAIRS SOLDIERS; RESULTS FROM THE FIRST YEAR

Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James E. McCarroll, Ph.D., M.P.H., LCDR Patcho Santiago, M.D., M.P.H., Christine Gray, M.P.H., David M. Benedek, M.D., John H. Newby, Ph.D., M.S.W., Stephanie N. Riley, B.S., Chad A. Spiegel, M.A., Natalie T. Kodsy, M.A., and Robert J. Ursano, M.D.

*Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD*

## BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) recover, identify, and evacuate the remains of deceased military personnel and their personal effects from Iraq and Afghanistan. Exposure to death and the combat environment increases the risk for posttraumatic distress and adjustment difficulties.

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale):** TEAM is a new education and skills training intervention to help MA Soldiers and their spouses reduce distress and foster adaptive coping in the months after deployment. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support. Spouses are offered an equivalent intervention.

**Basis of the Intervention:** TEAM training is based on the evidence-informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4].

**Psychological First Aid:**
PFA is designed to reduce the distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through the principles of Safety, Calming, Connecting, Self-Efficacy, and Hope/Optimism.


**Cognitive-Behavioral Therapy:**
CBT is an approach to altering thoughts and beliefs that lead to emotions. It has been shown to treat and prevent PTSD successfully when administered early after trauma exposure. However, TEAM is education-based and NOT therapy or mental health treatment.

**Delivery of Intervention:**
- Interactive group workshops
- Educational handouts
- Toll-free phone line and email service
- Website (resources, training materials)
- Referral resources
- Concierge-type service
- Stepped collaborative care model[5]
- Support through spouse and buddy

**Goals:** The training of Soldiers to:
- Develop self-care skills and increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to health care utilization
- Address health risk behaviors (e.g., alcohol use)

## METHODS

**Procedures:** MA Soldiers at Fort Lee, Virginia were randomized to receive either the TEAM intervention (Workshop) or no intervention (Usual Services). Workshops were held at 1, 2, 3 & 6 months post deployment. Questionnaires were completed at return from deployment and 1, 2, 3, 6 & 9 months. Outcomes included psychiatric disorder (PTSD, depression), psychological distress, functional impairment, and impact of TEAM on post deployment readjustment.

**Participants:** 75 MA Soldiers (Workshop Group N=39; Usual Services N=36)
- **Gender:** 73.1% male; 26.9% female
- **Age:** range 19-50 years (M=28.58)
- **Education:** 1.5%<HS; 43.3% HS/GED; 50.7% some college; 4.5% bachelors
- **Rank:** 16.4%≤Private or Private First Class; 65.7% Specialist or Corporal; 17.9%≥Sergeant (all enlisted)
- **Race:** 63.6% White; 16.7% Black; 12.1% Hispanic; 4.5% American Indian or Alaskan Native; 3.0% Asian or Pacific Islander
- **Marital Status:** 68.7% married; years M=4.76; 73.3% live with their spouse

**Measures:**
- **Probable PTSD:** PTSD Checklist (PCL-17): "How much you have been bothered by each problem in the past month" (1="not at all" to 5="extremely"). Probable PTSD if total symptom score ≥50 (range 17-85) and 1 intrusion, 3 avoidance, 2 hyperarousal symptoms scored moderately or higher.
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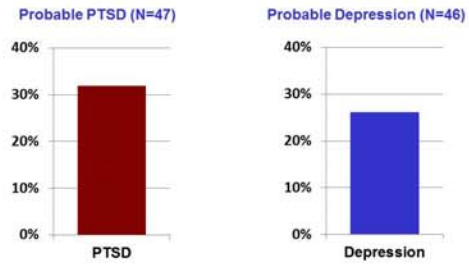
## PRELIMINARY RESULTS

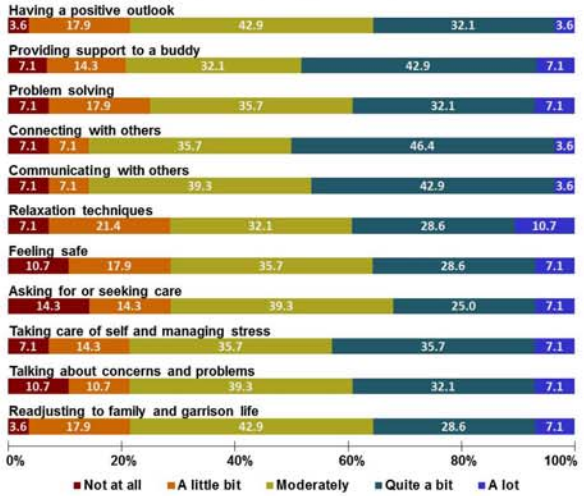
**PTSD and Depression** *(1 month post deployment)*




**Work-Related Impairment** *(reported at least half of the time, 1 mo. post deploy.; N=47)*
- 70.2% Felt fatigued
- 53.2% Lost concentration
- 40.4% Worked more slowly than usual

## PRELIMINARY RESULTS (CONT.)

**Helpfulness of TEAM:** *(2-9 mos. post deployment; N=28)*




**Limitations**
- Self-selection to study and attendance
- Self-report measures
- Preliminary data (2 cohorts completed, 1 in progress, 2 more cohorts expected)

## SUMMARY AND IMPACT

- These preliminary data suggest Mortuary Affairs Soldiers returning from Iraq and Afghanistan have high rates of PTSD and depression.
- Soldiers returning from deployment report benefit from Psychological First Aid and Cognitive Behavioral Therapy-based early educational intervention.
- Most participants described TEAM as being "Moderately" or "Quite a bit" helpful.
- TEAM enhances the natural role of spouse and buddy support and addresses barriers to health care utilization.
- Interventions of this type are needed due to the high number of Soldiers returning from deployment with psychiatric disorders and low mental health care utilization[6].
- Findings have implications for use of this intervention with Soldiers in other military branches, first responders, disaster workers and others exposed to the dead.

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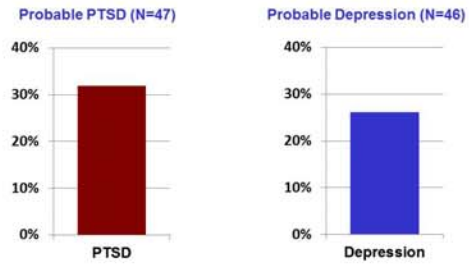


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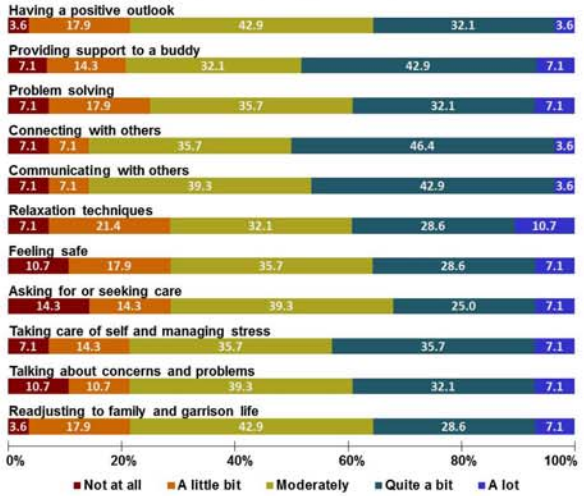


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## Appendix K

**Empirical evidence for a Psychological First Aid-based intervention in soldiers post-deployment.**

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### Abstract

#### Statement of the Problem

The development of interventions for returning soldiers and their families is critical to the mental and behavioral health of soldiers returning from deployments to Iraq and Afghanistan. Mortuary Affairs (MA) soldiers in the U.S. Army perform duties involving recovery, identification and evacuation of the dead are at increased risk for development of distress, disorder and health risk behaviors such as increased use of alcohol and tobacco. Studies suggest that regardless of profession, training, or past experience, duties involving recovery and identification of human remains are associated with acute and long-term psychological distress and psychiatric disorders. Mortuary Affairs soldiers report high rates of probable posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment. They report needing health care but not obtaining needed care, suggesting the importance of better understanding barriers to health care utilization. To our knowledge, there are no post-deployment interventions designed specifically for MA soldiers, spouses and buddies. We report preliminary findings of a randomized controlled intervention study using the principles of Psychological First Aid as an intervention in the first 9 months post-deployment in Mortuary Affairs Soldiers.

#### Subjects

Mortuary Soldiers are recruited into the study within a month of return from deployment to Iraq or Afghanistan. Participation is voluntary and IRB-approved Informed Consent is obtained from all participants. Participants are enlisted US Army personnel. Thus far, 86 soldiers have been recruited into the study across 4 cohorts. Study participants are 70.9% male, 29.1% female, age 19-50 years old (M=28.58). They are 63.6% White; 16.7% Black; 12.1% Hispanic; 4.5% Native American; 3.0% Asian. The majority (68.7%) are married; the mean number of years married is 4.76.

#### Procedures

This longitudinal, controlled intervention study randomizes MA soldiers into intervention and control groups within a month of return from deployment. All study participants complete questionnaires at 1, 2, 3, 6, and 9 months that include questions about deployment experiences, mental health including PTSD (PCL-17) and depression (PHQ-9), health care utilization, barriers to care, social support, health risk behaviors, and evaluation of aspects of the intervention. The intervention, TEAM (Troop Education for Army Morale), is based on evidence-informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, and hope/optimism), and is delivered through workshops conducted at 1, 2, 3, and 6 months post-deployment, as well as handouts, a website and phone line. Spouses of intervention-group soldiers are also provided the opportunity to attend separate workshops with similar educational content. Both soldiers and their spouses are taught to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify barriers to care and promote health care utilization when needed.

## Results

Preliminary results from the first 4 cohorts will be presented. Data to date indicate rates of probable PTSD and probable depression to be 31.9% and 26.1%, respectively, in soldiers one month post-deployment. Among participants, 14.9% reported obtaining medical care for emotional or family problems, and 34.0% felt in need of medical care but did not obtain any. Of the participants, 28.9% reported that they drank more alcohol than usual or re-started after quitting, 22.2% consume 5 or more alcohol drinks at one time, and 40.5% increased tobacco use or re-started after quitting. Longitudinal data on 4 cohorts of Mortuary Affairs soldiers will be presented. There is a trend indicating the effectiveness of the TEAM intervention. Specifically, findings are presented on disorder, distress and health risk behaviors (e.g., increases in alcohol and tobacco use) for the intervention and control groups at 1, 2, 3 and 6 months post-deployment in order to evaluate the effectiveness of our TEAM intervention. Multivariate logistic analyses are used to examine the mediating effects of variables such as social support. Barriers to health care utilization will also be examined and reported.

## Conclusions

Preliminary results suggest that MA soldiers are at increased risk for development of post-deployment disorders, distress and health risk behaviors. Preliminary results also suggest a trend that the TEAM program utilizing principles of Psychological First Aid may be an effective intervention for soldiers returning from deployment. This study potentially provides a model for reducing stress and increasing adaptive functioning that can be adapted to other soldiers and disaster workers.

# EMPIRICAL EVIDENCE FOR A PSYCHOLOGICAL FIRST AID-BASED INTERVENTION IN SOLDIERS POST-DEPLOYMENT

Christine L. Gray, M.P.H., Carol S. Fullerton, Ph.D., Quinn M. Biggs, Ph.D., M.P.H., James McCarroll, Ph.D., M.P.H., LCDR Patcho Santiago, M.D., M.P.H., John H. Newby, Ph.D., M.S.W., Stephanie N. Riley, Natalie T. Kodsy, M.A., B.S., Chad A. Spiegel, M.A., and Robert J. Ursano, M.D.

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## BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) recover, identify, and evacuate the remains of deceased military personnel and their personal effects from Iraq and Afghanistan. Those duties increase their risk for the development of distress, disorder and health risk behaviors. Evaluation of interventions that aim to reduce barriers to health care utilization and promote adaptive coping is needed[1,2].

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale):** TEAM is a new education and skills training intervention to help MA Soldiers and their spouses reduce distress and foster adaptive coping in the months after deployment. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support. Spouses are offered an equivalent intervention.

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**Delivery of Intervention:**

- Interactive group workshops
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**Participants:** 86 MA Soldiers (Workshop Group N=46; Usual Services N=40)

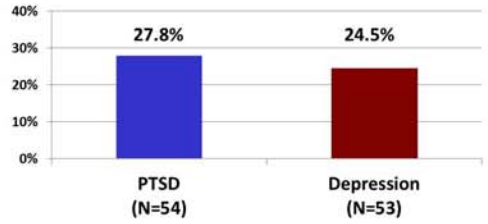
- **Gender:** 70.1% male; 29.9% female
- **Age:** range 19-50 years (M=28.26)
- **Education:** 0%<HS; 37.7% HS/GED; 55.8% some college; 6.5% bachelors
- **Rank:** 10.4%≤Private or Private First Class; 81.1% Specialist or Corporal; 7.8%≥Sergeant (all enlisted)
- **Race:** 60.5% White; 15.8% Black; 13.2% Hispanic; 6.6% American Indian or Alaskan Native; 3.9% Asian or Pacific Islander
- **Marital Status:** 64.9% married; years M=4.27; 73.1% live with their spouse

**Measures:**

- **Probable PTSD:** PTSD Checklist (PCL-17): Probable PTSD if total symptom score ≥50 (range 17-85).
- **Probable Depression:** Patient Health Questionnaire (PHQ-9): Positive if 5 or more of 9 symptoms present and at least 1 symptom is depressed mood or anhedonia.

## PRELIMINARY RESULTS

**Probable PTSD and Probable Depression** *(1 month post -deployment)*




**Health Behaviors** *(1 month post-deployment)*

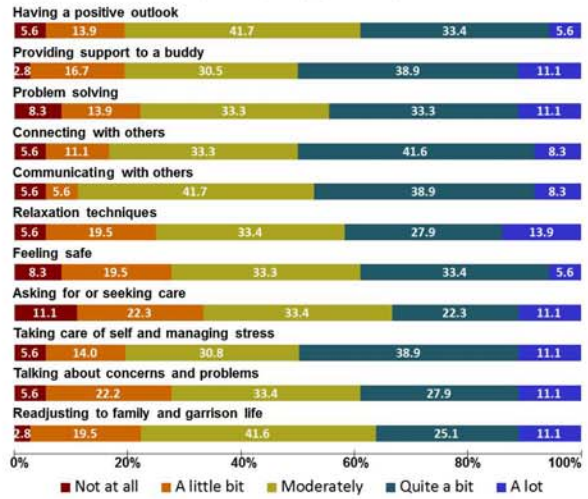
- 23.1% Drank more than usual in the past month
- 19.2% Usually have 5 or more drinks at one time
- 31.5% Increased tobacco use in the past month
- 33.3% Felt in need of medical care, but did not obtain it

**Barriers to Care** *(1 month post-deployment, % that agree or strongly agree the concern listed might affect the decision to receive mental health counseling or services)*

- 24.1% Believe unit members would lose confidence in them
- 18.6% Would be too embarrassed
- 18.5% Don't trust mental health professionals
- 31.5% Worry they would be seen as weak

## PRELIMINARY RESULTS (CONT.)

**Helpfulness of TEAM:** *(2-9 mos. post deployment; N=36)*

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- These preliminary data suggest Mortuary Affairs Soldiers returning from Iraq and Afghanistan have high rates of PTSD and depression.
- Soldiers returning from deployment report benefit from Psychological First Aid and Cognitive Behavioral Therapy-based early educational intervention.
- Most participants described TEAM as being "Moderately" or "Quite a bit" helpful.
- TEAM enhances the natural role of spouse and buddy support and addresses barriers to health care utilization.
- Interventions of this type are needed due to the high number of Soldiers returning from deployment with psychiatric disorders and low mental health care utilization[6].
- Findings have implications for use of this intervention with Soldiers in other military branches, first responders, disaster workers and others exposed to the dead.

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*Funded by U.S. Army Medical Research & Materiel Command, Congressionally Directed Medical Research Program Award W81XWH-08-2-0180*

## Appendix L

### Evidence for TEAM: A post deployment Psychological First Aid-based educational program for U.S. Army mortuary affairs soldiers

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Carol S. Fullerton, Ph.D.
Christine Gray, M.P.H.
James E. McCarroll, Ph.D., M.P.H.
COL David M. Benedek, M.D.
LCDR Patcho Santiago, M.D., M.P.H.
Robert J. Ursano, M.D.

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### Abstract

U.S. Army Mortuary Affairs Soldiers (MA) who serve in Iraq and Afghanistan are at high risk for post-deployment psychological distress and psychiatric disorder. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid and delivered through workshops, handouts, a website, and phone line. Soldiers learn to use self-care skills, provide support (buddy care), and identify barriers to care. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. TEAM workshops are held at 1, 2, 3, and 6 months. At one month post-deployment, probable PTSD and probable depression were 27.8% and 24.5%, respectively; health risk behaviors were high (23.1% drank more alcohol than usual, 31.5% increased tobacco use); and barriers to seeking mental health care were considerable. On average, TEAM was rated as helpful in important coping areas (recognizing problems, connecting and communicating with others, seeking help, feeling safe, using calming techniques to reduce arousal). Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

# EVIDENCE FOR TEAM: A POST DEPLOYMENT PSYCHOLOGICAL FIRST AID-BASED EDUCATION PROGRAM FOR U.S. ARMY MORTUARY AFFAIRS SOLDIERS

Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., Christine Gray, M.P.H., James E. McCarroll, Ph.D., M.P.H., COL David M. Benedek, M.D., LCDR Patcho Santiago, M.D., M.P.H., and Robert J. Ursano, M.D.

*Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD*

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**Basis of the Intervention:** TEAM training is based on the evidence-informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4].

**Psychological First Aid:** PFA is designed to reduce the distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through the principles of Safety, Calming, Connecting, Self-Efficacy, and Hope/Optimism.


**Cognitive-Behavioral Therapy:** CBT is an approach to altering thoughts and beliefs that lead to emotions. It has been shown to treat and prevent PTSD successfully when administered early after trauma exposure. However, TEAM is education-based and NOT therapy or mental health treatment.

**Delivery of Intervention:**

- Interactive group workshops
- Educational handouts
- Toll-free phone line and email service
- Website (resources, training materials)
- Referral resources
- Concierge-type service
- Stepped collaborative care model[5]
- Support through spouse and buddy

**Goals:** The training of Soldiers to:

- Develop self-care skills and increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to health care utilization
- Address health risk behaviors (e.g., alcohol use)

## METHODS

**Procedures:** MA Soldiers at Fort Lee, Virginia were randomized to receive the TEAM intervention (Workshop) or no intervention (Usual Services). Workshops were held at 1, 2, 3 & 6 months post deployment. Questionnaires were completed at return from deployment and 1, 2, 3, 6 & 9 months. Outcomes included psychiatric disorder (PTSD, depression), health risk behaviors, barriers to seeking mental health care, and impact of TEAM on post deployment readjustment.

**Participants:** 86 MA Soldiers (Workshop Group N=46; Usual Services N=40)

- **Gender:** 70.1% male; 29.9% female
- **Age:** range 19-50 years (M=28.26)
- **Education:** 0%<HS; 37.7% HS/GED; 55.8% some college; 6.5% bachelors
- **Rank:** 10.4%≤Private or Private First Class; 81.1% Specialist or Corporal; 7.8%≥Sergeant (all enlisted)
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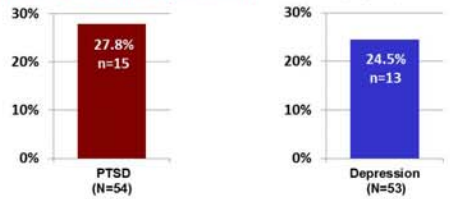
- **Marital Status:** 64.9% married; years M=4.27; 73.1% live with their spouse

**Measures:**

- **Probable PTSD:** PTSD Checklist (PCL-17): Probable PTSD if total symptom score ≥50 (range 17-85).
- **Probable Depression:** Patient Health Questionnaire (PHQ-9): Positive if 5 or more of 9 symptoms present and at least 1 symptom is depressed mood or anhedonia.

## PRELIMINARY RESULTS

**Probable PTSD and Depression** *(1 month post-deployment)*




**Health Behaviors** *(1 month post-deployment)*

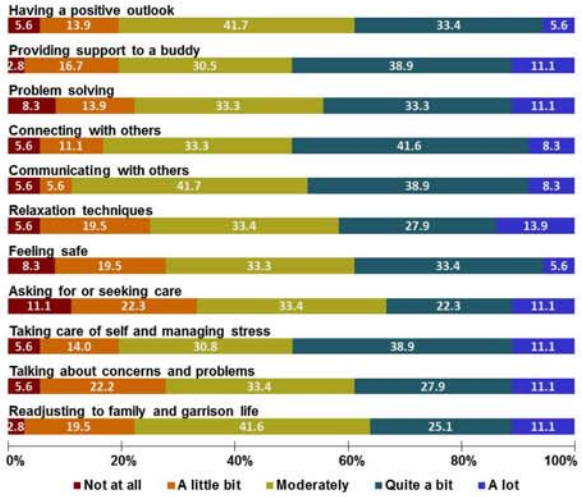
- 23.1% Drank more than usual in the past month
- 19.2% Usually have 5 or more drinks at one time
- 33.3% Felt in need of medical care, but did not obtain it

**Barriers to Care** *(1 month post-deployment, % that agree or strongly agree the concern listed might affect the decision to receive mental health care)*

- 24.1% Believe unit members would lose confidence in them
- 18.6% Would be too embarrassed
- 18.5% Don't trust mental health professionals
- 31.5% Worry they would be seen as weak

## PRELIMINARY RESULTS (CONT.)

**Helpfulness of TEAM:** *(2-9 mos. Post-deployment; N=28)*




**Limitations**

- Self-selection to study and attendance
- Self-report measures
- Preliminary data (3 cohorts completed, 2 in progress, 1 more cohort expected)

## SUMMARY AND IMPACT

- These preliminary data suggest Mortuary Affairs Soldiers returning from Iraq and Afghanistan have high rates of PTSD and depression.
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# TROOP EDUCATION FOR ARMY MORALE (TEAM): A POST DEPLOYMENT EDUCATIONAL PROGRAM FOR MORTUARY AFFAIRS SOLDIERS; RESULTS FROM THE FIRST TWO YEARS

Daniel Cox, Ph.D., Carol S. Fullerton, Ph.D., Quinn M. Biggs, Ph.D., M.P.H., James E. McCarroll, Ph.D., M.P.H., Allison Stuppy, B.A., Jessica Kansky, B.A., and Robert J. Ursano, M.D.

*Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD*

## BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) recover, identify, and evacuate the remains of deceased military personnel and their personal effects from Iraq and Afghanistan. Exposure to death and the combat environment increases the risk for posttraumatic distress and adjustment difficulties.

## NEW EDUCATIONAL INTERVENTION

**TEAM (Troop Education for Army Morale):** TEAM is a new education and skills training intervention to help MA Soldiers and their spouses reduce distress and foster adaptive coping in the months after deployment. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support. Spouses are offered an equivalent intervention.

**Basis of the Intervention:** TEAM training is based on the evidence-informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4].

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**Cognitive-Behavioral Therapy:** CBT is an approach to altering thoughts and beliefs that lead to emotions. It has been shown to treat and prevent PTSD successfully when administered early after trauma exposure. However, TEAM is education-based and NOT therapy or mental health treatment.

**Delivery of Intervention:**

- Interactive group workshops
- Educational handouts
- Toll-free phone line and email service
- Website (resources, training materials)
- Referral resources
- Concierge-type service
- Stepped collaborative care model[5]
- Support through spouse and buddy

**Goals:** The training of Soldiers to:

- Develop self-care skills and increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to health care utilization
- Address health risk behaviors (e.g., alcohol use)

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**Procedures:** MA Soldiers at Fort Lee, Virginia were randomized to receive the TEAM intervention (Workshop) or no intervention (Usual Services). Workshops were held at 1, 2, 3 & 6 months post deployment. Questionnaires were completed at return from deployment and 1, 2, 3, 6 & 9 months. Outcomes included psychiatric disorder (PTSD, depression), health risk behaviors, barriers to seeking mental health care, and impact of TEAM on post deployment readjustment.

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**Measures:**

- **Probable PTSD:** PTSD Checklist (PCL-17): Probable PTSD if total symptom score ≥50 (range 17-85).
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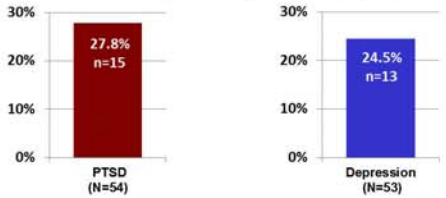
**Probable PTSD and Depression** *(1 month post-deployment)*




**Health Behaviors** *(1 month post-deployment)*

- 31.5% Increased tobacco use in the past month
- 23.1% Drank more than usual in the past month
- 19.2% Usually have 5 or more drinks at one time
- 33.3% Felt in need of medical care, but did not obtain it

**Barriers to Care** *(1 month post-deployment, % that agree or strongly agree the concern listed might affect the decision to receive mental health care)*

- 24.1% Believe unit members would lose confidence in them
- 18.6% Would be too embarrassed
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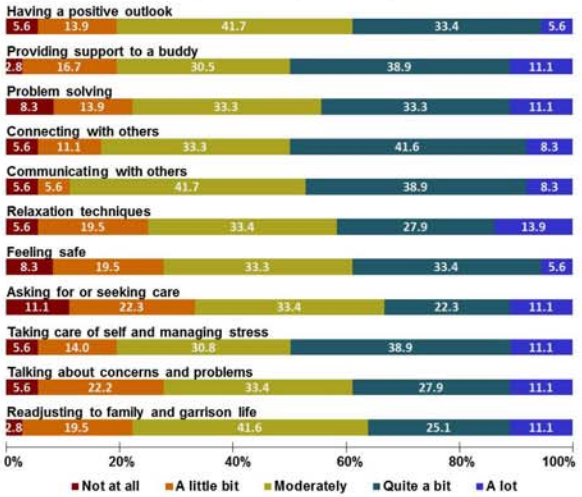
- 31.5% Worry they would be seen as weak

## PRELIMINARY RESULTS (CONT.)

**Helpfulness of TEAM:** *(2-9 mos. Post-deployment; N=28)*

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## Appendix N

### Troop Education for Army Morale (TEAM): A post deployment educational program for mortuary affairs soldier: Results from the first two years

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Carol S. Fullerton, Ph.D.
Daniel Cox, Ph.D.
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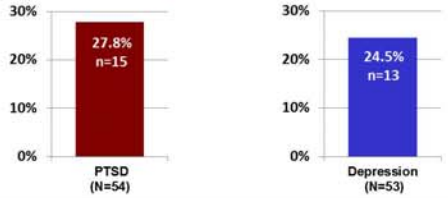


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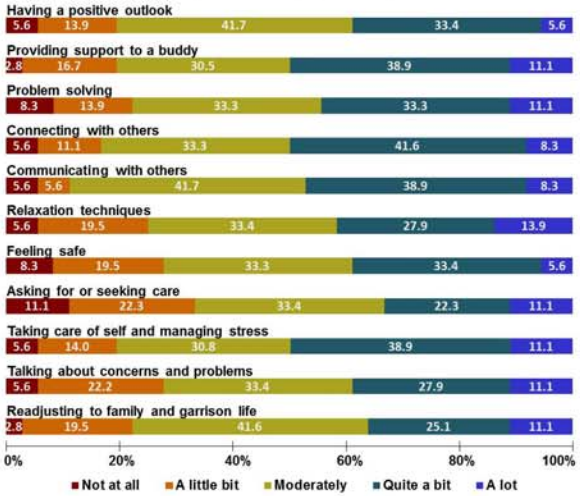
**Helpfulness of TEAM:** *(2-9 mos. Post-deployment; N=28)*

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